

### **Amendments to the Specification:**

Please replace paragraph [0025] with the following amended paragraph:

[0025] To form a reticular structure 22, shown in FIG. 8, according to the method of the present invention, a reticulated foam pre-structure 10 is placed in an openable container 12 having a container lid 12A, as illustrated by FIGS. 1 and 2. Preferably, the material used for the pre-structure material 10 is polyurethane foam, although any material that provides a sufficient number of pores is suitable for use as the pre-structure material. The foam pre-structure 10 is then infiltrated with a refractory mold material 14, as shown in FIG. 3. The container lid 12A is closed for applying a vacuum to the openable container 12. The refractory mold material 14 is allowed to solidify to form a refractory mold 16. Preferably, the refractory mold material 14 is a watery gypsum plaster suspension.

Please replace paragraph [0028] with the following amended paragraph:

[0028] FIG. 6 shows the device according to the present invention, which is a heat-resistant container 18 mounted on a cooling plate 20. The refractory mold 16 is pre-heated and placed into the heat-resistant container 18. As shown in FIG. 7, the heat-resistant container ~~46~~ 18 is geometrically larger than the mold 16. The difference in dimensions between the heat-resistant container 18 and the mold 16 results in a gap 19 between the mold 16 and the heat-resistant container 18. The mold 16 is then infiltrated with a molten substance that fills the voids ~~49~~ 17 in the mold 16, thereby forming a reticular structure 22, as shown in FIG. 8. Any suitable casting material may be used in the method according to the present invention. For metallic reticular structures, the molten substance comprises preferably metals, alloys, ceramics, metal ceramics, and/or any suitable combination thereof. After the molten substance has solidified, the reticular structure 22 is withdrawn from the heat-resistant container 18 and the refractory mold 16 removed from the structure ~~46~~ 22.

Please replace paragraph [0030] with the following amended paragraph:

[0030] The heat-resistant container 18 according to the invention holds the mold 16 and has at least one opening 21 for pouring the molten metal into the refractory mold 16. Preferably, the interior space of the container 18 is larger than the pre-heated refractory mold 16 filled with the molten substance, in order to provide a gap between ~~the a container wall 18A~~ of the container and the refractory mold 16. The size of the gap is freely-selectable and is determined by the difference in size between the heat-resistant container 18 and the filled, pre-heated refractory mold 16. After pouring the molten substance into the mold 16, a solid jacket or shell is then cast onto the structure, *i.e.*, the refractory mold 16 filled with the molten substance, thereby filling the gap 19 between the structure and the container 18. The container 18 is temperature-controlled and maintained at a temperature that is cooler than that of the molten metal and the pre-heated refractory mold 16. Since the jacket is in direct contact with the container 18, heat is drawn from the casting metal directly into the container 18 during the solidification process, allowing the structure 22 to cool from the outside inward toward the center of the refractory mold ~~18~~ 16, thereby producing a cast structure with a fine grain and, also, producing optimal bonding between ligaments 22A of the reticular structure 22 and the solid shell. The reticular structure 22 that is obtained after solidification of the molten substance can then be cleaned and is modifiable, for example, by applying a conventional coating to the structure 22.